

# METAPHYSICAL FOUNDATIONALISM AND THE PRINCIPLE OF SUFFICIENT REASON

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**ABSTRACT.** The metaphysical foundationalist claims that reality is hierarchically arranged, with maximal chains of phenomena ordered by the grounding relation terminating in contingently existent fundamentalia. Some influential foundationalists claim that there must be something fundamental because *being* requires a ground or explanation, or because grounding chains that do not terminate are viciously infinitely regressive. Surprisingly, reconstruction of these arguments reveals an enthymematic assumption that makes appeal to a Principle of Sufficient Reason: a principle the foundationalist would not, and should not, accept. I explore three different Principles of Sufficient Reason: two familiar to us from cosmological arguments and one, novel, dependence PSR. I argue that without a PSR, certain of the most influential arguments to the existence of something fundamental do not work; and that with a PSR, certain of the most influential arguments to the existence of something fundamental leave us with a position that is epistemically unstable.

**Key Words:** Metaphysical foundationalism, Principle of Sufficient Reason, Grounding, Explanation, Cosmological Arguments, Fundamentality.

According to the metaphysical foundationalist, reality is hierarchically structured and well-founded: maximal chains of phenomena ordered by the grounding relation terminate in a fundamental ground.<sup>1</sup> This, or something like it, is the prevailing view in contemporary analytic metaphysics. Indeed, something like this view has dominated the history of the Western tradition.

It is a curious feature of the contemporary literature that, although it is widely assumed that there is something fundamental, there is very limited discussion of why we should believe this. Such is often the way with dogma. With few exceptions, justifications for a commitment to the existence of something fundamental are cast in terms of shadowy remarks, metaphors, or recourse to historical arguments that, although charming, are often question-begging and vague. The reasons we have for being foundationalists are less than clear, and where there is limited clarity on what these reasons are, there is limited clarity on the consequences of endorsing them.

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<sup>1</sup>See Schaffer, 2003, p.498 and 2009 for discussions of this type of view. Possible examples of accounts that fit this schema are the Tractarian world-view of Wittgenstein, the world of states of affairs of Armstrong, the cumulative hierarchy account of sets, Aristotle's picture involving prime matter, and the substance based ontology of E.J.Lowe.

The foundationalist will claim that there needs to be something fundamental because *being* or *existence* stands in need of an ultimate ground or explanation.<sup>2</sup> The existence of this ultimate ground is then arrived at by way of an argument from vicious infinite regress: where each thing depends upon something else we are never able to explain how anything exists at all. Surprisingly, reconstructing these arguments reveals that if they are to have any hope of getting us beyond the dependent facts to something non-dependent and fundamental, they require an assumption that makes appeal to a Principle of Sufficient Reason (PSR). This suggestion flies in the face of anything the foundationalist would, or should believe themselves to be committed to, for where everything has an explanation - according to the PSR - there is nothing fundamental. As we will see, matters are somewhat more complicated than this, but the upshot of the arguments are that metaphysical foundationalism, so argued to, is epistemically unstable.

The PSR, both controversial and unpopular, is most notably associated with cosmological arguments to the existence of God. These arguments proceed in two stages: the first stage of the argument(s) invokes a version of the PSR to argue from the existence of contingent phenomena to a necessary being. The second moves us from the existence of a necessary being to the existence of God. The first stage of the argument invokes one of two versions of the PSR: everything has an explanation; or every contingent thing has an explanation.<sup>3</sup>

If the foundationalist implicitly relies on a PSR, we can wonder which version she means to invoke. Crucially, no version can be ruled out *a priori* on the grounds that it does not allow us to establish foundationalism. Does the foundationalist mean to say that everything has an explanation? Or does she mean to say that only contingent phenomena have explanations? Or perhaps she means something different altogether. Perhaps the foundationalist means to employ a novel version of the PSR tied to dependence and metaphysical explanation, divorced entirely from considerations of contingency and necessity. According to this version of the PSR, every dependent fact has an explanation.

Whichever version of the PSR is employed in the foundationalist argument, the position [metaphysical foundationalism] is, I will argue, in trouble. If the foundationalist wishes to claim there must be something fundamental because *everything* has an explanation, foundationalism fails by its own lights. If what the foundationalist wishes to say is that there must be something fundamental because all *contingent* phenomena have explanations then things look even worse. Finally, the employment of the dependence PSR would seem to require the inclusion of additional assumptions that the foundationalist may not wish to endorse.

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<sup>2</sup>See Schaffer, 2010, p.63 for a presentation of this kind of view.

<sup>3</sup>Cosmological arguments to the existence of God commonly invoke the notion of a *cause* or explanation. For the sake of simplicity here, I will only speak of explanations in my formulations of the principle.

The purpose of this paper is two-fold. First, it aims to demonstrate that some version of a Principle of Sufficient reason is in operation in some influential contemporary arguments to the existence of something fundamental: Arguments that do not wear their commitment to the principle on their sleeve. Second, *given* that the principle is in operation, this paper aims to demonstrate that foundationalism, so motivated, is at best troubled and at worst incoherent. I do not defend the use of the Principle of Sufficient Reason in foundationalist arguments; neither do I defend nor reject metaphysical foundationalism. These are projects for elsewhere. Although I make use of historical treatments of some of the arguments that are employed in the contemporary literature, this piece does not target those treatments.

In §1, I set out the relevant features and common commitments of metaphysical foundationalism. In §2, I discuss the sorts of arguments commonly presented in defense of the claim that there must be something fundamental, suggesting that they rely on a PSR. In §3, I discuss Principles of Sufficient Reason as they are employed in cosmological arguments to the existence of God. In §4, I explore cosmological-style arguments to the existence of something fundamental and some of their consequences. In §5, I discuss an argument to the existence of a fundamental ground that employs a dependence PSR.

#### I. METAPHYSICAL FOUNDATIONALISM

According to metaphysical foundationalism, there is (i) a derivative metaphysical superstructure that is hierarchically arranged, with phenomena at any level of the superstructure being grounded in, or dependent upon, phenomena at the level below, where (ii) the maximal chains of phenomena ordered by this relation terminate in something fundamental. Metaphysical foundationalism is, thus, a conjunctive thesis according to which reality is *hierarchically structured* and *well-founded*.<sup>4</sup>

The relation that orders the metaphysical superstructure is one of metaphysical dependence, or ground. The fact [the sun is spherical and golden] is grounded in the facts [the sun is spherical] and [the sun is golden]. Facts about determinables are grounded in facts about determinates, just as facts about the mental are grounded in facts about the physical. The list goes on. To say that one thing is grounded in, or dependent upon, another is to say that that thing depends upon something else for its being; or in the case of facts, for their obtaining; or in the case of propositions, for their being-true. It is to say that the grounded object is metaphysically explained by its ground(s).

There is disagreement over whether grounding is a univocal notion, or whether we should distinguish between relations of ground and those of *ontological dependence*. I am of the view that we should, however, in what follows, I speak of grounding and dependence interchangeably. In the context of the present

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<sup>4</sup>There are alternative formulations of foundationalism. One such formulation allows that there are ungrounded facts, but where those facts are not necessarily fundamental.

discussion, allowing for variations in detail, the consequences for a world ordered by a relation of ontological dependence, and one ordered by a relation of ground will be similar. More generally though, it is also more natural to describe a fact as ‘depending on another’, rather than ‘being grounded in another’. So I will use ‘depends on’ to cover both cases.

Grounding is involved with a particular kind of non-causal, *metaphysical explanation*. [The sun is spherical] helps explain [the sun is spherical and golden]. Although there is disagreement over whether these explanations need to be backed by real relations of ground, all parties agree that anything that is grounded has a metaphysical explanation. That’s just what it is to be grounded! It seems natural to suppose that explanations always involve propositions; and that propositions stand in for facts. For ease of exposition, I will speak largely in terms of facts, although one need not assume that this fact talk is ontologically committing.

Where one thing is grounded in another, the ground helps *fix* the existence, or obtaining, of that which it grounds. The obtaining of [A] and [B] ensures the obtaining of [[A] and [B]]. Or something like this. Grounding is also asymmetric, transitive and irreflexive. This means that nothing explains that which explains it, nothing explains itself, and where [C] explains [B] and [B] explains [A], [C] explains [A]. Obviously, the foundationalist is also committed to the assumption that grounding is well-founded.<sup>5</sup>

A grounding chain is *maximal* if and only if it is not properly contained within any larger chain: a chain is maximal just in case nothing can be added to it in order to make it larger. Otherwise it is non-maximal. I assume here that the foundationalist is concerned with maximal grounding chains.<sup>6</sup> When the foundationalist claims that there must be something fundamental, what she means to say is that *every maximal grounding chain must contain a minimal element*.<sup>7</sup> These minimal elements are the fundamentalia. The foundationalist does not need to argue that *all* chains of phenomena ordered by the grounding relation are finite; nor that every chain must terminate in something fundamental. The foundationalist can tolerate infinitely long non-maximal grounding chains, for example. What the foundationalist cannot, however, tolerate is a picture on which there is *nothing* fundamental.

The phenomena that populate the fundamental level - whether they be facts, simples etc - are *metaphysically independent*. This means that if [A] is fundamental, there is no [B] upon which [A] depends,

<sup>5</sup>There are different ways of understanding well-foundedness. On one understanding, well-founded grounding chains are finite. On another, well-founded grounding chains can be infinitely long but still grounded in something fundamental. See Bliss 2013, p.416 and Cameron 2008, p.4.

<sup>6</sup>One could also be a foundationalist who holds that *every* chain of phenomena ordered by the grounding relation must terminate in something fundamental. Foundationalism, so formulated, would be very strong. In fact, far stronger than anything the position requires.

<sup>7</sup>Bliss 2013, p.416.

and [A] does not depend upon itself.<sup>8</sup> The foundationalist is committed to the view that the fundamentalia give rise to everything else - what we can call the derivative metaphysical superstructure. This view is in keeping with the more general view that grounds *necessitate* that which they ground.<sup>9</sup> The existence of the fundamentalia is enough to ensure the existence of everything else.

## 2. METAPHYSICAL FOUNDATIONALISM AND THE PRINCIPLE OF SUFFICIENT REASON

To be a metaphysical foundationalist is to think that maximal grounding chains terminate in some fundamental level of metaphysically independent phenomena - or a single phenomenon for the monist - that gives rise to the derivative metaphysical superstructure. But why prefer this view over infinite descent, or, indeed, believe that it is necessarily so?

Although philosophers often claim that the foundationalist picture has intuitive appeal, it is incumbent upon them to provide reasons to believe it. Particularly when what they wish to claim is that it is *necessarily* the case. There are a number of different arguments available in the contemporary foundationalist literature to the conclusion that there must be - or is - something fundamental.<sup>10</sup>

The first arguments to consider are arguments from *vicious infinite regress*.<sup>11</sup> Leibniz was of the view that there could not be infinite decomposition; that there needs to be simples. For where phenomena depend upon their parts for their reality, where there is infinite divisibility, there is nowhere from which this reality can be derived. He puts this as follows:

Where there are only beings by aggregation [composite] objects, *there are no real beings*. For every being by aggregation presupposes beings endowed with real unity [simples], because *every being derives its reality only from the reality of those beings of which it is composed, so that it will not have any reality at all if each being of which it is composed is itself a being by aggregation*, a being for

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<sup>8</sup>There are different possible views of fundamentalia. One could distinguish between dependent and non-dependent facts, for instance, where independent facts are a subset of the set of non-dependent facts. Dasgupta (2012) has a view according to which we can distinguish between *autonomous* facts and brute facts. On this view, brute facts are facts that *could* have explanations but happen not to, and autonomous facts are facts that are not apt for having explanations. I remain neutral on the kinds of facts that could be fundamental facts, but I assume that the sorts of facts that the foundationalist takes to be fundamental are brute as opposed to autonomous facts.

<sup>9</sup>Philosophers also disagree on what kind of modality is involved with grounding. Some philosophers are of the view that different kinds of grounding involving different modalities: grounding between concepts involves conceptual necessity, grounding between normative truths involves normative necessity. Other are of the view that grounding always involves metaphysical necessity.

<sup>10</sup>See Cameron 2008 for a discussion of some of the other arguments.

<sup>11</sup>See Bennett 2011, p.30, Fine 2010, p.15 and Schaffer, 2010, p.37, for example. I have also found that when pressed to defend their commitment to something fundamental, philosophers very often make recourse to a regress argument.

which we must still seek further grounds for its reality, grounds which can never be found in this way, if we must always continue to seek for them.<sup>12</sup>

Schaffer echoes this worry when he states:

There must be a ground of being. If one thing exists only *in virtue of* another, then there must be something from which the reality of the derivative entities ultimately derives.<sup>13</sup>

And again:

But endless dependence conflicts with the foundationalist requirement that there be basic objects ... There would be no ultimate ground. Being would be infinitely deferred, never achieved.<sup>14</sup>

If everything has its being, or gains its reality, in dependence upon something else, then where nothing has its being independently, the worry is that nothing has any being at all. Being, it is thought, has to come from somewhere. This is an argument from vicious infinite regress.

We must be careful here, however, because upon closer consideration it is not so obvious that the regress is vicious, or, at least, there is a formulation of the regress that is benign. If  $x$  depends upon  $y$ , and  $y$  upon  $z$ , and so on *ad infinitum*, then each thing for whose reality we are seeking an explanation has one. If what we wish to explain is where  $x$  derives its reality from, citing the existence of  $y$  - upon which  $x$  depends - is perfectly acceptable. Or, in the language of facts, we say that [A] obtains in virtue of [B] and [B] in virtue of [C] and so on, where the obtaining of each fact is explained in terms of the obtaining of the fact(s) upon which it depends. In a reality that admitted of limitless descent, every thing would have its reality explained in terms of that upon which it depends. The regress is benign.

Far from being unacceptable, so many explanations in philosophy seem to function in this way. Moral philosophers of different stripes explain the moral facts in terms of non-moral facts, for example, where those explanations do not need to make recourse to the fundamental facts in order to be considered adequate. As is the case in many other domains.

The regress is *not*, however, benign when what we take to be at issue is the question of *how anything has being at all*; how anything turned out to be the case whatsoever.<sup>15</sup> Although on the previous reading of the regress we have explained how this thing here has being, and that thing there has being, we have failed to explain how anything has being whatsoever; how it all turned out to be the case in the first place. If the question to which we are seeking an answer is the question of how anything has being at all, the

<sup>12</sup>Leibniz, 1989, p. 85. *Italics* my own.

<sup>13</sup>Schaffer, 2010, p.37.

<sup>14</sup>Schaffer, 2010, p.63.

<sup>15</sup>I understand Dasgupta 2013, pp.5-6 to be making the same point where he discusses the kinds of explanations we are after when we wish to terminate our grounding chains.

regress is *vicious*. Citing  $z$  as the ground of  $y$ , and  $y$  as the ground of  $x$ , does not help us explain how  $x$ ,  $y$  and  $z$ , or anything for that matter, has being. At each stage all we manage to do is put off answering the question.<sup>16</sup>

This subtle distinction between different readings of the regress is not often noted in the contemporary foundationalist literature.<sup>17</sup> The foundationalist, however, generally claims that on pain of *vicious* infinite regress, there must be something fundamental. So let's take the foundationalist at their word: what the foundationalist takes to be at issue, such that they posit the existence of something fundamental, is the question of how anything has being, or reality, or existence whatsoever. What the foundationalist is really concerned to explain is how the whole heaping lot of it turned out to be the case in the first place. Positing the existence of fundamentalia is supposed to help answer *this* question.<sup>18</sup> The foundationalist of this ilk is seeking an ultimate explanation for the contents of reality.

Enthymematic in these arguments is an assumption that makes appeal to some version or other of a Principle of Sufficient Reason.<sup>19</sup> The foundationalist thinks that there is something here for which we can have, or ought to have, an explanation, namely, being, or existence, itself. This is just an application of what Della Rocca refers to as the *full blown PSR*: the formulation of the principle according to which *existence* is explicable, it has an explanation.<sup>20</sup> And this is exactly what the foundationalist appears to be attempting to offer us an explanation of. What is a *ground of being* if not that which allows us to explain how anything has being whatsoever?<sup>21</sup>

So which version of a Principle of Sufficient Reason is appeal being made to here? Fortunately, there is historical precedent for exploring exactly this kind of question. In particular, many formulations of cosmological arguments to the existence of God were aimed at this end: formulations of arguments that employed some version or other of a Principle of Sufficient Reason. Given the seeming similarity in explanatory project, perhaps the foundationalist means to employ a version of the PSR with which we are already familiar. It is to a consideration of cosmological arguments, then, to which we now turn.

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<sup>16</sup>See Aikin 2005, Bliss 2013 and Passmore 1961.

<sup>17</sup>Historically, Leibniz seemed to hold a similar view.

<sup>18</sup>If this is not what the foundationalist takes to be at issue, then they must find different reasons for supposing that there must be something fundamental. The alternative reading of the regress is benign and hence not able to provide us with a reason for being a foundationalist.

<sup>19</sup>The terse and cryptic presentation of regress arguments means that many of their vital assumptions are unclear.

<sup>20</sup>On this Della Rocca states '...for to insist that there be an explanation for the existence of each existing thing is simply to insist on the PSR itself...' (2010, p.7).

<sup>21</sup>This question as posed here is part rhetorical, but also a genuine plea for illumination.

### 3. PRINCIPLES OF SUFFICIENT REASON AND COSMOLOGICAL ARGUMENTS

Cosmological arguments aim at establishing the existence of God. The first stage of a cosmological argument moves us from the existence of contingent phenomena to the existence of a necessary being. What a cosmological argument aims to explain is how anything exists at all, not why I exist, nor why my chair exists, but how anything exists whatever.

Cosmological arguments employ one of two versions of the Principle of Sufficient Reason. The first version - the *strong* PSR - is employed, perhaps most notably by Leibniz. He puts it thus:

And that of *sufficient reason*, by virtue of which we consider that we can find no true or existent fact, no true assertion, without there being a sufficient reason why it is thus and not otherwise...<sup>22</sup>

We can put the principle as follows:

PSR<sub>s</sub>: Every fact has an explanation.

More commonly, in contemporary formulations of the argument, a weaker version of the principle is employed.<sup>23</sup> The *weak* PSR:

PSR<sub>w</sub>: Every contingent fact has an explanation.

In the first three of his *Five Ways*, Aquinas presents cosmological arguments to the existence of God;<sup>24</sup> all of which were thought to fail.<sup>25</sup> Leibniz attempted to rescue the cosmological argument, and was of the view that even if we embrace the possibility of an infinitely regressive causal series, we have not escaped the need, altogether, to posit the existence of a necessary being. Leibniz puts this point as follows:

I certainly grant that you can imagine that the world is eternal. However, since you assume only a succession of states, and since no reason for the world can be found in any one of them whatsoever (indeed, assuming as many of them as you like won't in any way help you to find a reason), it is obvious that the reason must be found elsewhere. For in eternal things, even if there is no cause, we must still understand there to be a reason... From this it follows that even if we assume the eternity of the world, we cannot escape the ultimate and extramundane reason for things, God.<sup>26</sup>

Let's take some contingent fact [A]. Let's also assume PSR<sub>s</sub>. [A] must have an explanation. Let's assume there is some [B] that explains [A], and some [C] that explains [B] and so on *ad infinitum*. Each contingent fact is explained. Now, it might seem as though an infinitude of contingent facts would allow

<sup>22</sup>Leibniz, 1991a, no.32.

<sup>23</sup>See Rasmussen, 2010 for a discussion of contemporary formulations of cosmological arguments that employ a principle of sufficient reason.

<sup>24</sup>Aquinas, 1965, pp.13-15.

<sup>25</sup>See Craig, 1980 ch.5 for a discussion of Aquinas' Five Ways.

<sup>26</sup>Leibniz, 1991b, pp.42-43.

that every thing has an explanation. Not quite, for not everything that needs an explanation has one; and nothing has been *fully* explained. It remains to explain how any contingent fact exists whatsoever. What explains everything is a necessary being.

Why must this ultimate explainer be necessary, rather than contingent? No contingent being can be *fully* explained in terms of another contingent being; no appeal to something contingent can help us explain how any contingent thing exists at all. Think of it this way: imagine you want to know what makes an intelligent thought an intelligent thought. Suppose someone suggests that a thought is intelligent when it follows from an intelligent thought. This sounds pretty good, except that we must now wonder what makes the prior thought an intelligent thought, and so on for each prior intelligent thought. Citing intelligent thoughts as explanations of what the intelligence of intelligent thoughts consists in is to fail to explain what about intelligence we are seeking to explain in the first place.<sup>27</sup> Returning to our discussion, only that which is *absolutely* or metaphysically necessary, thought Leibniz, is fit to explain the existence of the world.<sup>28</sup> If the extramundane explainer were contingent, then it, itself, would stand in need of explanation; it would be amongst the collection of things to be explained.

In employing a strong version of the PSR Leibniz needs also to provide a sufficient reason for the existence of the necessary being itself. The necessary being - God - is self-explanatory, thought Leibniz. The reason for God's existence is contained within Himself; He is the cause, and thus the reason, for His own existence.<sup>29</sup>

Modern expositions of cosmological arguments, however, tend to employ the weak PSR. Various cosmological arguments can be constructed depending upon which of a number of assumptions are employed. We begin by employing an assumption that relates to circularity: nothing is *self-explanatory*.<sup>30</sup> Let's call this principle C<sub>1</sub>:

(C<sub>1</sub>): Nothing is self-explanatory.

We can note a variety of ways in which a fact may be self-explanatory: directly versus indirectly; fully versus partially. [A] explains [A] is an example of a fact being directly and fully self-explanatory. [A]

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<sup>27</sup>This is the interpretation of a regress argument expounded by Ryle as presented in Passmore 1961, pp.26-27.

<sup>28</sup>Leibniz, 1991b, p.42.

<sup>29</sup>Leibniz, 1991b, p. 42. Leibniz thought that it was in God's essence to exist.

<sup>30</sup>Of course, a notable (and controversial) exception to this principle is Leibniz's self-explanatory God. God is a necessary being, and He is necessary *because* He is self-explanatory. Contingent phenomena, by their nature, cannot be self-explanatory. For Leibniz, C<sub>1</sub> was true of everything save God.

may also be partially grounded in each of [A] and [B] and [C]. This is an example of direct partial dependence. [A] explains [B], [B] explains [C] and [C] explains [A] is an example of some facts' being indirectly, partially self-explanatory.<sup>31</sup> This explanatory loop is an example of an indirect explanation where the explanatory connection is intransitive; <sup>32</sup> where the connection is transitive the loop collapses. I can think of no possible case of indirect, full dependence.

The next assumption invoked in this style of cosmological argument is that there is a conjunction, or totality, of all contingent facts. This collection is contingent, as with its components. We might think of this collection as a conjunction of all contingent facts.<sup>33</sup>

(C<sub>2</sub>): There is a contingent conjunction of all contingent facts, C<sub>c</sub>.

A cosmological argument to the existence of a necessary being employing PSR<sub>w</sub> looks as follows:

PSR<sub>w</sub>: Every contingent fact has an explanation.

C<sub>1</sub>: Nothing is self-explanatory.

C<sub>2</sub>: There is a contingent conjunction of all contingent facts, C<sub>c</sub>.

- (1) There is a contingent conjunction of all contingent facts C<sub>c</sub>. (C<sub>2</sub>)
- (2) C<sub>c</sub> has an explanation. (by PSR<sub>w</sub>)
- (3) No fact contained within C<sub>c</sub> can explain C<sub>c</sub>. (by C<sub>1</sub>)
- (4) There must be some fact - [x] - that explains C<sub>c</sub>. (by PSR<sub>w</sub>)
- (5) If [x] were contingent, it would be amongst the collection of phenomena to be explained.
- (6) [x] can't be contingent. (by C<sub>1</sub>)
- (7) [x] is necessary.

Even where every contingent fact has an explanation, there is something unexplained, namely the conjunction of all contingent facts. By PSR<sub>w</sub>, every contingent fact has an explanation. Therefore that big fact, C<sub>c</sub>, also has an explanation. What explains the conjunction cannot be one of its conjuncts on pain of circularity. The ultimate explainer must be outside the totality, in which case it cannot be contingent and is instead necessary.

#### 4. METAPHYSICAL FOUNDATIONALISM AND COSMOLOGICAL ARGUMENTS

We come now to metaphysical foundationalism. I have suggested that the correct interpretation of some foundationalist arguments in defense of their position is one according to which they aim to explain

<sup>31</sup>Analogously, loops of this structure could also be generated in time travel cases where one knows how to build a time machine in virtue of having travelled back in time and delivered a note to oneself. See Lewis 1976.

<sup>32</sup>The explanatory loop is generated by taking the transitive closure of the intransitive relations.

<sup>33</sup>This is sometimes referred to in the literature as the Big Contingent Conjunctive Fact.

how anything has being, or existence at all: how the world turned out to be the case. The suggestion is that the foundationalist is making appeal to a Principle of Sufficient Reason.

If the foundationalist wishes to claim there must be something fundamental for reasons of sufficient reason, they need to find a suitable version of the principle. Perhaps the foundationalist wishes to claim that *everything* has an explanation - as per  $PSR_s$ . Failing that, they could instead employ a weakened version of the principle -  $PSR_w$ . But what does the employment of either one of these principles mean for foundationalism?

In keeping with cosmological arguments to the existence of God, we can construct cosmological-style arguments to the existence of a fundamental metaphysical ground. In fact, the principles employed in cosmological arguments are readily adapted to form metaphysical principles.

Recall from §1, according to the foundationalist, the grounding relation is asymmetric, transitive and irreflexive. We can take the foundationalist to be committed to a non-circularity assumption,  $M_1$ . Although  $M_1$  is the same as  $C_1$ , I change the name as to not confuse the cosmological arguments with the arguments of the metaphysical foundationalist.

$M_1$ : Nothing is self-explanatory.

Let's also assume that there is a conjunction of all dependent facts. After all, there must be something that is clearly our explanatory target. For now, I introduce this assumption without defending it. This will give rise to the metaphysical correlate of  $C_2$ :

$M_2$ : There is a dependent conjunction of all dependent facts,  $C_d$ .

We can begin by exploring the possibility that what the metaphysical foundationalist wishes to say is that there must be something fundamental because *everything* has an explanation.

4.1. The Strong PSR. Before I even begin, I wish to speak briefly to what I imagine is the immediate, knee-jerk reaction to my even entertaining this suggestion. 'Of course we don't think everything has an explanation!' cries the foundationalist. I might remind the reader of the dialectic. The foundationalist must supply us with a reason to believe that there is something fundamental. The arguments they do supply, when properly reconstructed, rely upon an assumption that invokes a PSR. Which PSR this is in question. Given, then, our state of epistemic innocence regarding reasons to suppose there is anything fundamental, the strong PSR seems as good a place as any to begin. In fact, it seems like a perfectly reasonable place to begin: historically, this version of the principle *has been* employed in arguments to the existence of an ultimate explainer.

If every fact has an explanation ( $PSR_s$ ) and nothing is self-explanatory ( $M_1$ ), metaphysical foundationalism is in trouble. If to be fundamental is to go unexplained, where everything has an explanation there

is nothing fundamental. Alternatively, if everything has an explanation, but there is something fundamental, then the fundamentalia must be self-explanatory. But they can't be.

Perhaps there is some fix here. Although the metaphysical foundationalist endorses the no-circularity assumption ( $M_1$ ), perhaps they could abandon it with limited consequence. Perhaps they could even, as with Leibniz, restrict the possibility of self-dependence to the fundamentalia.  $M_1$  suitably refined could allow that the fundamentalia, but nothing else, are self-explanatory thus allowing the foundationalist to employ the strong principle after all.

One problem with this suggestion might be that if to be self-explanatory is to be necessary, then the fundamentalia are necessary beings.<sup>34</sup> We will see in a moment what some of the problems are with this view. Another worry might be that anything that is self-explanatory is divine.<sup>35</sup> If, on the other hand, the fundamentalia are not necessary, they must be contingent. On a view according to which the fundamentalia are contingent existents, the possibility of their being self-explanatory or self-dependent seems strange. If contingent phenomena could just as well not exist, then it seems that there must be reasons for their existence when they do. It is hard to see what a contingent phenomenon that contains the reason for its existence internal to itself would be like - if, indeed, that is what it means to be self-dependent. It is hard to see how anything that is *fully* self-explanatory, at least, could be contingent. And if the fundamentalia are independent of everything else save themselves, it is hard to see how they could fail to be fully self-explanatory.

There is no discussion in the contemporary literature of what it means for something to be self-dependent. To be sure, philosophers are generally adamant that nothing can exist in this way. Given their resistance to the possibility, I take it that whatever it is to be self-dependent it is metaphysically substantive.<sup>36</sup> Either that or the notion is completely incoherent, which would also explain resistance to it. Without a better understanding of self-dependence, and if and how it intersects with contingency and necessity, it is difficult to rule out the conclusion that some contingent phenomena could be self-dependent. It seems equally as difficult to rule it in.

If the foundationalist wishes to argue that there is something fundamental because everything has an explanation, then the fundamentalia must be self-explanatory. But the foundationalist says they can't be. This is not the version of the PSR the foundationalist means to employ.

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<sup>34</sup>Recall that Leibniz thought that God is necessary *because* he is self-explanatory.

<sup>35</sup>If it is only in virtue of the possession of divine properties that something can have it in its essence to exist and this is what it is to be self-explanatory - then anything that is self-explanatory will be divine.

<sup>36</sup>Even if there does not turn out to be any metaphysically substantive reasons for supposing that nothing can be self-dependent, there might be good epistemic reasons for supposing that nothing can be self-explanatory.

4.2. The Weak PSR. Failing the viability of  $PSR_s$  the foundationalist is left with  $PSR_w$ . At this stage, one might wonder what on earth foundationalism has to do with contingency and necessity. Consider, again, the dialectic. The foundationalist wants to say that there is something fundamental *because* being requires an explanation. These arguments make recourse to some kind of PSR. The strong PSR is demonstrably problematic, leaving us with the weak principle. But this aside, it is also true that the fundamentalia will be either contingent or necessary, or some combination thereof. Just as the dependent phenomena will also be contingent or necessary. The foundationalist cannot avoid discussing contingency and necessity.

We can construct a cosmological-style argument to the existence of something fundamental, employing  $PSR_w$ ,  $M_1$  and  $M_2$ . In order to understand what the consequences of this argument might be, on the first pass of the argument, I suggest that we understand the totality of all dependent facts to contain *both* contingent and necessary facts.<sup>37</sup>

If there is a dependent totality of dependent facts ( $M_2$ ), nothing can be self-explanatory ( $M_1$ ) and every contingent fact has an explanation ( $PSR_w$ ), then the foundationalist is left with two choices. If the conjunction of dependent facts contains both necessary and contingent facts, then we can assume that the conjunction is contingent.<sup>38</sup> It has an explanation. The fundamentalia could be necessary; but this option doesn't look appealing. We will see the reasons for this in a moment. Or they could be contingent. But if they are contingent then they must have an explanation. If they are contingent and don't have explanations the  $PSR_w$  has been violated; so this option is not available. If they do have explanations, then they are either self-explanatory or explained by something else. By definition, if they have explanations they are not fundamental. But I have suggested that appropriate modifications might allow that the fundamentalia are self-explanatory. But this leaves us with the problem of self-explanatory contingent facts. If there is a totality of all dependent facts to be explained because every contingent fact has an explanation, then metaphysical foundationalism looks as though it is between a rock and a hard place.

This picture is further complicated by the fact that the metaphysical foundationalist is commonly of the view that the fundamentalia are contingent.<sup>39</sup> The foundationalist will thus think that there is a collection

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<sup>37</sup>Philosophers often discuss the relationship of dependence between facts about sets and their members. Pure sets, if they exist, exist necessarily. There is nothing *ad hoc* about supposing that the collection of dependent phenomena contains both necessary and contingent phenomena.

<sup>38</sup>That the collection is contingent means that the problems produced when trying to combine the foundationalist commitments with either the necessity or contingency of the fundamentalia will be the same whether or not the collection of dependent phenomena contains necessary existents. The totality of all *dependent, contingent* phenomena will also be unexplainable in terms of either necessary or contingent fundamentalia.

<sup>39</sup>Armstrong, for whom reality grounds out in simples, is explicit that they are contingent, 'each state of affairs, and each constituent of each state of affairs, meaning by their constituents the particulars, properties, relations and, in the case of higher-order

of dependent facts that is explained in terms of a collection of independent, *contingent* facts. But if there must be something fundamental *because* there is a collection of dependent facts that stands in need of an explanation, it doesn't seem that the fundamentalia can be contingent. This is true, as we have seen, when employing  $PSR_s$  and for the foregoing set of reasons, also true for  $PSR_w$ . Not to mention how peculiar it would be to be of the view that the grounds of being are contingent.  $PSR_w$  applied to the dependent conjunction of dependent facts renders metaphysical foundationalism an incoherent position.

Perhaps then, where applying  $PSR_w$ , we should restrict the totality of facts to be explained to the totality of *contingent* facts.<sup>40</sup> Indeed, as to not load this formulation of the argument against the foundationalist, we can even restrict the totality to the totality of contingent, *dependent* facts. We can therefore adapt  $M_2$  to form  $M_2^*$ . An argument to the existence of something fundamental employing the weak PSR might look as follows:

$PSR_w$ : Every contingent fact has an explanation.

$M_1$ : Nothing is self-explanatory.

$M_2^*$ : There is a contingent, dependent conjunction of all contingent dependent facts,  $C_{cd}$ .

- (1) There is a contingent, dependent conjunction of all contingent dependent facts  $C_{cd}$ . ( $M_2^*$ )
- (2)  $C_{cd}$  has an explanation. (by  $PSR_w$ )
- (3) No fact contained within  $C_{cd}$  can explain  $C_{cd}$ . (by  $M_1$ )
- (4) There must be some  $[x]$  that explains  $C_{cd}$ . (by  $PSR_w$ )
- (5) If  $[x]$  were contingent, it would have an explanation.
- (6)  $[x]$  can't be contingent. (by  $M_1$ )
- (7)  $[x]$  is necessary.

The argument not only gets us to the existence of something fundamental but also tells us its modal status. If the foundationalist wishes to employ  $PSR_w$  to argue to the conclusion that there must be something fundamental because there is a contingent, dependent totality of all contingent dependent facts,

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states of affairs, lower-order states of affairs, is a contingent existent' (1997, p. 1). Schaffer takes the cosmos to be fundamental. The cosmos is a contingent existent.

<sup>40</sup>This restriction to contingent phenomena is not *ad hoc*. Schaffer 2010, for example, takes the cosmos to consist of concreta at the actual world. His doctrine of Priority Monism - the fundamental ontological ground is the whole cosmos - is a doctrine that therefore applies simply to contingent concreta.

and every contingent fact has an explanation, then the fundamentalia will exist necessarily.<sup>41</sup> If the foundationalist is correct that grounding involves necessitation, then this conclusion ought to be wholly unacceptable. If the fundamentalia exist necessarily, and necessitate the existence of everything else, then there is only one way the world can be, namely, exactly how it is! Of course, one way around this problem is to deny that grounding involves necessitation, and, indeed, there are philosophers who challenge this claim.<sup>42</sup> For anyone who holds, however, that grounding does involve necessitation, metaphysical foundationalism will prove to be an unpalatable position.

The foundationalist appears to be in a quandary. If they employ a strong version of the PSR, then the position fails by its own lights. Employment of the weaker version of the principle also runs into trouble. If the fundamentalia do not have explanations then they are necessary, but if they are not necessary, they have explanations, in which case they are contingent. Yet if they are contingent, they cannot be fundamental. Nothing that has an explanation can be metaphysically independent because it would depend upon its explainer. Whether the fundamentalia are contingent or necessary, metaphysical foundationalism, argued to by some version or other of the PSR, is epistemically unstable. The view, as it is understood here, cannot be sustained in light of the reasons for which we are told we ought to have it.

##### 5. THE DEPENDENCE PSR

Perhaps what the foundationalist means to employ is a novel version of the PSR cast in terms of dependence and explanation. A possibly viable principle suggests itself immediately:

PSR<sub>d</sub>: Every dependent fact has an explanation.

This principle has the advantage of involving the notion of dependence and, thus, looking much more like a principle the foundationalist would be willing to employ. As far as supplying a justification for the foundationalist commitment, however, it is neither clear that it preserves the integrity of the position, nor that it renders it acceptable.

In §1, I suggested that to be grounded in something is to be explained by that thing: what it *is* to be grounded is to have a metaphysical explanation. If this is correct, then PSR<sub>d</sub> is true by definition. Of course every dependent fact has an explanation, that's just what it is to be dependent! Employing this principle to provide us with a reason to believe there is something fundamental yields the following

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<sup>41</sup>What exists outside the collection of contingent, dependent facts are the necessary facts - dependent and independent - and the contingent, independent facts. But by the PSR<sub>w</sub> every contingent fact has an explanation, so the contingent, independent facts must also have explanations. This leaves the necessary dependent and independent facts as the only plausible candidates for the fundamentalia.

<sup>42</sup>See Chudnoff 2011.

claim: there must be something fundamental because every fact that has a (metaphysical) explanation has a (metaphysical) explanation. This is true but hardly supplies us with a justification for a commitment to the position.

It also follows from the definition of dependence, and with it the dependence PSR, that any fact that does not have an explanation is not dependent. This is just exactly what it is to be independent. But that it follows from our analytic dependence PSR that facts that do not have explanations are not dependent does not give us any reason to suppose that any such non-dependent facts actually exist. Analytic truths are not existence entailing. So, how, if at all, can the dependence PSR be employed by the foundationalist to supply us with a reason to commit to the existence of something fundamental?

Armed with the assumptions introduced in §4, we can attempt to construct a cosmological-style argument to the existence of something non-dependent and fundamental.<sup>43</sup>

PSR<sub>d</sub>: Every dependent fact has an explanation.

M<sub>1</sub>: Nothing is self-explanatory.

M<sub>2</sub>: There is a dependent conjunction of all dependent facts, C<sub>d</sub>.

- (1) There is a dependent conjunction of all dependent facts, C<sub>d</sub> (M<sub>2</sub>).
- (2) Every dependent fact has an explanation (PSR<sub>d</sub>).
- (3) Therefore C<sub>d</sub> has an explanation, [x].
- (4) Nothing is self-explanatory (M<sub>1</sub>).
- (5) [x] cannot be amongst the conjuncts of C<sub>d</sub>.
- (6) [x] must be non-dependent.

Several stages of this argument require consideration. The first is the commitment to M<sub>2</sub>. According to this assumption, there is a conjunction of all dependent facts, and this conjunction is itself a dependent fact. This assumption strikes me as both plausible and intuitive. One could deny it, however, by denying either one of its conjuncts: we could deny that there is a conjunction of all dependent facts, or grant that there is such a conjunction, but deny that it is dependent. Considering the latter possibility first, it is not clear to me how this option is open to the foundationalist, for it is a feature of the logic of ground that conjunctions are grounded in their conjuncts - [[A] and [B]] is grounded in [A] and [B]. It is not clear how, once we grant that there is a big conjunction of dependent facts, we can deny that this conjunction is itself dependent. If this is correct, then the first option looks more plausible: deny that there is a big conjunction, C<sub>d</sub> in the first place. But it is also difficult to see how one would go about this, for where we have [A], [B], [C] etc, it is natural to think we also have their conjunction [[A] and [B] and [C]...]. One

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<sup>43</sup>I assume that facts divide exhaustively into dependent facts and independent facts.

problem for such a large conjunction, however, is that it would likely be infinitely large. And infinitely large conjunctions are often thought to be rather unpleasant.

In our discussion of cosmological arguments to the existence of God, we saw that no conjunct of the big contingent conjunctive fact can explain the big fact on pain of circularity. One reason for this is that whatever (causally) explains a conjunction explains each of its conjuncts: if [C] explains [[A] and [B]], then [C] explains [A] and [C] explains [B]. Thus, where [A] explains [[A] and [B]], so the argument goes, then [A] explains [A]. This stands in complete violation of the no circularity assumption. The cosmological-style argument to the existence of something fundamental presented here relies similarly on the assumption that whatever grounds a conjunction grounds each of its conjuncts. But there is every reason to suppose, in the case of grounds, at least, that this is incorrect. As noted in the previous paragraph, it is a feature of the logic of ground that conjunctions are grounded in their conjuncts. Although a conjunction *entails* each of its conjuncts it does not explain them, rather they explain it. Even though the fact that [[A] and [B]] entails [A], it does not explain it. Rather, [A] helps explain the conjunction. It does not follow from the fact that [A] (metaphysically) explains [[A] and [B]] that [A] explains itself.

If this is correct, it follows that our argument is not sound, for where there is no threat of circularity, we have no reason to suppose that [x] - which is to explain  $C_d$  - cannot be amongst its conjuncts. And indeed, this is exactly what the foundationalist will claim. But note, then, that the foundationalist is left with no reason to suppose that there must be something fundamental. If the conjunction of all dependent facts is (fully) explained by its (dependent) conjuncts, then there is no reason to go beyond the collection of dependent facts. If the conjunction of all dependent facts is fully explained by its dependent conjuncts then we have no reason whatsoever to suppose that there is, or must be, something fundamental. This cannot be the argument the foundationalist means to employ.

What the foundationalist requires is a reason to move beyond the collection of dependent facts. Recall that in the case of cosmological arguments to the existence of a necessary being, there was a demand to explain how any contingent thing exists whatsoever. Analogously, we could take the foundationalist to be aiming at an explanation of how any *dependent* thing exists whatsoever.

To make this explanatory demand more concrete, let's suppose the foundationalist wishes to explain the fact that any dependent thing exists at all - [D]. This fact will either be dependent or not. If it is not dependent, then it doesn't need an explanation. If it is, then what explains it? The fact that any dependent thing exists at all looks like a general fact. If this is correct, then what explains it are its instances - the fact that I exist, the fact that you exist, and so on. Again, we seem to have no reason to move beyond the collection of dependent facts.

We may, however, have a reason to move beyond the collection of dependent facts if we include in our argument an additional assumption which states that *no dependent fact can completely explain how any dependent thing exists at all*. Armed with this assumption, we have reason to move beyond the dependent facts on pain of explanatory failure. Here is the argument:

PSR<sub>d</sub>: Every dependent fact has an explanation.

M<sub>3</sub>: The fact that any dependent fact exists at all - [D] - is a dependent fact.

M<sub>4</sub>: No dependent fact can completely explain how any dependent fact exists at all.

- (1) The fact that any dependent fact exists at all - [D] - is a dependent fact (M<sub>3</sub>).
- (2) Every dependent fact has an explanation (PSR<sub>d</sub>).
- (3) Therefore [D] has an explanation, [x].
- (4) No dependent fact can completely explain how any dependent fact exists at all (M<sub>4</sub>).
- (5) [D] requires a complete explanation.
- (6) Therefore, [x] cannot be dependent.

Although this argument employs the dependence PSR to get to the existence of something fundamental, it relies, crucially, on the assumptions that the fact that any dependent thing exists at all cannot be fully explained by dependent facts, and that this fact - [D] - has a complete explanation. These assumptions, although plausible, I would think, only further threaten the integrity of the position. Under which conditions is a complete explanation achieved? An explanation is complete when we are no longer able to continue to ask 'but why?'. When can we no longer continue to ask 'but why?'. When we terminate our explanations of course! The demand that something have a complete explanation is just the demand that we terminate the explanatory chain in which it participates. The assumption at line 5 begs the question. There is more that could be said about the failings of the aforementioned argument, but I leave off their consideration here.

## 6. CONCLUSION

Some influential contemporary foundationalists have claimed that there must be something fundamental as there must be an ultimate ground of being, or something of the like. To this end, they commonly invoke arguments from vicious infinite regress. I have argued that such regresses are, in fact, only genuinely unacceptable, and thus vicious, where what the foundationalist seeks to explain is how anything exists, or has being at all. Enthymematic in these arguments is an assumption that appeals to some version or other of a Principle of Sufficient Reason. Although such a suggestion will offend both the foundationalist and the position they espouse, unfortunately, a subset of influential arguments to the existence of something fundamental cannot work without it. Taking up the charge that, on pain of *vicious* infinite

regress, there must be something fundamental I have explored the consequences for foundationalism of employing each of three versions of a PSR. A task demanded by our naivety as regards reasons to suppose there is something fundamental. I have argued that metaphysical foundationalism, when justified in this way, leaves us with a position that is epistemically unstable.

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